## CLAIMS

What is claimed is:

1. A method for predicting disordered breathing in a patient, comprising:

detecting one or more conditions associated with disordered breathing;

comparing the one or more conditions to one or more sets of disordered breathing prediction criteria; and

predicting the disordered breathing based on the comparison, wherein at least one of comparing and predicting is performed at least in part implantably.

2. The method of claim 1, wherein predicting is performed at least in part implantably.

3. The method of claim 1, wherein each of comparing and predicting is performed at least in part implantably.

4. The method of claim 1, wherein detecting the one or more conditions comprises detecting a physiological condition.

5. The method of claim 1, wherein detecting the one or more conditions comprises detecting a sleep quality condition.

6. The method of claim 1, wherein detecting the one or more conditions comprises detecting a respiration quality condition.

7. The method of claim 1, wherein detecting the one or more conditions comprises detecting a respiratory system condition.

8. The method of claim 1, wherein detecting the one or more conditions comprises detecting a cardiovascular system condition.

9. The method of claim 1, wherein detecting the one or more conditions comprises detecting a nervous system condition.

10. The method of claim 1, wherein detecting the one or more conditions comprises detecting a blood chemistry condition.

11. The method of claim 1, wherein detecting the one or more conditions comprises detecting a muscle system condition.

12. The method of claim 1, wherein detecting the one or more conditions comprises detecting a non-physiological condition.

13. The method of claim 1, wherein detecting the one or more conditions comprises detecting an environmental condition.

14. The method of claim 1, wherein detecting the one or more conditions comprises detecting a body-related condition.

15. The method of claim 1, wherein detecting the one or more conditions comprises detecting a contextual condition.

16. The method of claim 1, wherein detecting the one or more conditions comprises detecting a sleep-related condition.

17. The method of claim 1, wherein detecting the one or more conditions comprises detecting a patient history condition.

18. The method of claim 1, wherein detecting the one or more conditions comprises detecting a patient reported condition.

19. The method of claim 1, wherein detecting the one or more conditions comprises detecting a condition used to verify the prediction of disordered breathing.

20. The method of claim 1, wherein each of the one or more sets of prediction criteria associated with disordered breathing comprises at least one threshold corresponding to at least one condition associated with disordered breathing.

21. The method of claim 1, wherein comparing the one or more conditions to the one or more sets of disordered breathing prediction criteria comprises comparing at least one of the one or more conditions associated with disordered breathing to a threshold corresponding to an onset of disordered breathing.

22. The method of claim 1, wherein comparing the one or more conditions to the one or more sets of prediction criteria comprises comparing a relationship between at least two of the one or more conditions to a relationship criterion corresponding to an onset of disordered breathing.

23. The method of claim 1, wherein comparing the one or more conditions to the one or more sets of prediction criteria comprises:

computing an estimated probability that disordered breathing will occur based on the one or more conditions; and

comparing the estimated probability to a threshold probability associated with an onset of disordered breathing.

24. The method of claim 23, wherein computing an estimated probability comprises computing a composite estimated probability score.

25. The method of claim 1, wherein predicting the disordered breathing comprises predicting the disordered breathing will occur if the one or more conditions are consistent with at least one set of prediction criteria.

26. The method of claim 1, further comprising establishing a particular set of prediction criteria based on the one or more conditions.

27. The method of claim 26, wherein establishing the particular set of prediction criteria is performed at least in part implantably.

28. The method of claim 1, further comprising adjusting a particular set of prediction criteria based on the one or more conditions.

29. The method of claim 28, wherein adjusting the particular set of prediction criteria is performed at least in part implantably.

30. The method of claim 28, wherein adjusting the particular set of prediction criteria comprises deleting the particular set of prediction criteria.

31. The method of claim 28, wherein adjusting the particular set of prediction criteria comprises:

calculating an estimated accuracy for the particular set of prediction criteria; and

adjusting the particular set of prediction criteria based on the estimated accuracy.

32. The method of claim 28, wherein adjusting the particular set of prediction criteria comprises:

calculating an estimated sensitivity for the particular set of prediction criteria; and

adjusting the particular set of prediction criteria based on the estimated sensitivity.

33. The method of claim 1, wherein predicting the disordered breathing comprises predicting the disordered breathing will occur within a particular time interval.

34. The method of claim 33, wherein predicting the disordered breathing will occur within the particular time interval comprises performing a real-time prediction of the disordered breathing.

35. The method of claim 1, further comprising collecting data associated with disordered breathing predictions.

36. The method of claim 35, wherein collecting the data associated with the disordered breathing predictions comprises counting the disordered breathing predictions.

37. The method of claim 35, wherein collecting the data associated with the disordered breathing predictions comprises collecting data associated with an accuracy of the disordered breathing predictions.

38. The method of claim 35, wherein collecting the data associated with the disordered breathing predictions comprises collecting data associated with the one or more conditions associated with disordered breathing.

39. The method of claim 1, further comprising:
collecting data associated with disordered breathing predictions; and
displaying the collected data.

40. The method of claim 1, further comprising:
collecting data associated with disordered breathing predictions; and
transmitting the data to a separate device.

41. A method for predicting disordered breathing in a patient, comprising:
detecting one or more conditions predisposing the patient to disordered breathing;
comparing the one or more predisposing conditions to one or more sets of prediction criteria associated with disordered breathing; and
predicting the disordered breathing based on the comparison, wherein at least one of comparing and predicting is performed at least in part implantably.

42. The method of claim 41, wherein predicting the disordered breathing is performed at least in part implantably.

43. The method of claim 41, wherein each of comparing and predicting is performed at least in part implantably.

44. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting a condition associated with an increased likelihood of disordered breathing.

45. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting a physiological condition.

46. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting a non-physiological condition.

47. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting a contextual condition.

48. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting air pollution.

49. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting a respiratory condition.

50. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting snoring.

51. The method of claim 41, wherein detecting the one or more predisposing conditions comprises detecting patient posture.

52. The method of claim 41, wherein:

detecting the one or more predisposing conditions comprises detecting a first type of disordered breathing; and

predicting the disordered breathing comprises predicting a second type or disordered breathing.

53. The method of claim 41, wherein predicting the disordered breathing comprises performing a real-time prediction of the disordered breathing.

54. The method of claim 53, wherein performing the real-time prediction of disordered breathing comprises predicting the disordered breathing will occur within about an 8 hour period following the disordered breathing prediction.

55. The method of claim 53, wherein performing the real-time prediction of disordered breathing comprises predicting the disordered breathing will occur during a next sleep time following the disordered breathing prediction.

56. An automated method for predicting disordered breathing in a patient, comprising:

detecting one or more precursor conditions associated with disordered breathing;

comparing the one or more precursor conditions to one or more sets of prediction criteria associated with disordered breathing; and

predicting the disordered breathing based on the comparison, wherein at least one of comparing and predicting is performed at least in part implantably.

57. The method of claim 56, wherein predicting the disordered breathing is performed at least in part implantably.

58. The method of claim 56, wherein each of comparing and predicting is performed at least in part implantably.

59. The method of claim 56, wherein detecting the one or more precursor conditions comprises detecting a condition associated with an impending onset of disordered breathing.

60. The method of claim 56, wherein detecting the one or more precursor conditions comprises detecting a respiratory system condition.

61. The method of claim 60, wherein detecting the respiratory system condition comprises detecting a respiration tidal volume pattern.

62. The method of claim 60, wherein detecting the one or more precursor conditions comprises detecting hyperventilation.

63. The method of claim 56, wherein detecting the one or more precursor conditions comprises detecting a blood chemistry condition.

64. The method of claim 63, wherein detecting the blood chemistry condition comprises detecting a level of $CO_2$.

65. The method of claim 56, wherein detecting the one or more precursor conditions comprises detecting a periodicity of occurrences of the disordered breathing.

66. The method of claim 56, wherein predicting the disordered breathing comprises performing the disordered breathing prediction in real-time.

67. The method of claim 66, wherein performing the disordered breathing prediction in real-time comprises predicting the disordered breathing will occur within about a five minute period following the disordered breathing prediction.

68. An automated medical device, comprising:

a detector system configured to detect conditions associated with disordered breathing; and

a prediction engine coupled to the detector system and configured to compare the detected conditions to one or more sets of prediction criteria and predict the disordered breathing based on the comparison, wherein the prediction engine includes an implantable component.

69. The medical device of claim 68, wherein the detector system comprises an implantable sensor.

70. The medical device of claim 68, wherein the detector system comprises a patient-external sensor.

71. The medical device of claim 68, wherein the detector system comprises a patient input device.

72. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a physiological condition.

73. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a cardiovascular system condition.

74. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a respiratory system condition.

75. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a nervous system condition.

76. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a blood chemistry condition.

77. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a non-physiological condition.

78. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense a contextual condition.

79. The medical device of claim 68, wherein the detector system comprises a sensor configured to sense an environmental condition.

80. The medical device of claim 68, wherein the detector system is configured to detect a condition related to patient history.

81. The medical device of claim 68, wherein the detector system comprises at least one network-accessible component.

82. The medical device of claim 68, wherein the detector system comprises at least one wirelessly connected component.

83. The medical device of claim 68, wherein the prediction engine is configured to establish the one or more sets of prediction criteria based on the detected conditions.

84. The medical device of claim 68, wherein the prediction engine is configured to adjust a particular set of prediction criteria based on the detected conditions.

85. The medical device of claim 68, wherein the prediction engine is configured to calculate an estimated accuracy of a particular set of prediction criteria and adjust the particular set of prediction criteria based on the estimated accuracy.

86. The medical device of claim 68, wherein the prediction engine is configured to calculate an estimated sensitivity of a particular set of prediction criteria and adjust the particular set of prediction criteria based on the estimated sensitivity.

87. The medical device of claim 68, wherein the prediction engine is configured to predict the disordered breathing will occur within a particular time interval on a real-time basis.

88. The medical device of claim 68, wherein:

the detector system is configured to detect conditions predisposing the patient to the disordered breathing; and

the prediction engine is configured predict that the disordered breathing will occur within a period of about 8 hours based on the predisposing conditions.

89. The medical device of claim 68, wherein:

the detector system is configured to detect disordered breathing precursor conditions; and

the prediction engine is configured to predict that the disordered breathing will occur within a period of about five minutes following a disordered breathing prediction.

90. The medical device of claim 68, further comprising a data storage unit configured to store data associated with disordered breathing predictions.

91. The medical device of claim 90, wherein the data storage unit is configured to counting a number of disordered breathing predictions.

92. The medical device of claim 91, wherein the number of the disordered breathing predictions comprises a number of successful disordered breathing predictions.

93. The medical device of claim 91, wherein the number of the disordered breathing predictions comprises a number of unsuccessful disordered breathing predictions.

94. The medical device of claim 90, wherein the data storage unit is configured to collect data associated with an accuracy of the disordered breathing predictions.

95. The medical device of claim 90, wherein data storage unit is configured to collect data associated with the conditions associated with disordered breathing.

96. The medical device of claim 68, further comprising:

a data storage unit configured to collect and store data associated with disordered breathing predictions; and

a display unit configured to display the collected data.

97. The medical device of claim 68, further comprising:

a data storage unit configured to collect and store data associated with disordered breathing predictions; and

a transmitter configured to transmit the collected data to a separate device.

98. A disordered breathing prediction system, comprising:

means for detecting one or more conditions associated with disordered breathing of a patient;

means for comparing the one or more conditions to one or more sets of disordered breathing prediction criteria; and

means for predicting the disordered breathing, wherein at least one of the means for comparing and the means for predicting include an implantable component.

99. The system of claim 98, further comprising means for establishing a particular set of prediction criteria.

100. The system of claim 98, further comprising means for adjusting a particular set of prediction criteria.

101. An automated system for predicting disordered breathing in a patient, comprising:

means for detecting one or more conditions predisposing the patient to disordered breathing;

means for comparing the one or more predisposing conditions to one or more sets of disordered breathing prediction criteria; and

means for predicting the disordered breathing based on the comparison, wherein at least one of the means for comparing and the means for predicting includes an implantable component.

102. A system for predicting disordered breathing in a patient, comprising:

means for detecting one or more precursor conditions associated with disordered breathing;

means for comparing the one or more precursor conditions to one or more sets of disordered breathing prediction criteria; and

means for predicting the disordered breathing based on the comparison, wherein at least one of the means for comparing and the means for predicting includes an implantable component.